DOCUMENT RESUME

ED 429 338 EA 029 735

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TITLE Outcomes of Students Enrolled in Developmental Education Courses.
PUB DATE 1998-00-00
NOTE 14p.; Paper presented at the Annual Meeting of the Mid-South Educational Research Association (27th, New Orleans, LA, November 4-6, 1998).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS College Outcomes Assessment; College Students; *Developmental Studies Programs; Higher Education; Instructional Effectiveness; *Outcomes of Education; *Remedial Instruction; Sex Differences; *Student Development
IDENTIFIERS Developmental Students; Louisiana

ABSTRACT

This report describes the educational outcomes of students enrolled in developmental/remedial courses at one postsecondary institution. Three questions are addressed: What are the demographics of students enrolled in developmental/remedial courses? What percentage of students pass developmental/remedial courses on the first attempt? and How do pass/fail elements modify the educational outcome of students who were enrolled in developmental/remedial education courses? Students enrolled in developmental/remedial courses at a multipurpose institution of higher education in northern Louisiana were studied for this report. Data were obtained from the Institutional Research Department and included information on the developmental course(s) in which each student was enrolled; the semester and year of enrollment; the age, sex, and race of the students; and the number of times the students attempted the developmental course(s). The results indicate that after a 7-year period, 16 percent of the students enrolled in developmental/remedial courses graduated, 9 percent were still enrolled, and 75 percent were not enrolled at the school. For the courses themselves, 77 percent of the students who were enrolled in developmental/remedial courses completed the courses on the first attempt and more females than males were enrolled in these types of courses. Contains 10 references. (RJM)

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ED 429 338

OUTCOMES OF STUDENTS ENROLLED IN DEVELOPMENTAL EDUCATION COURSES

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A paper presented at the annual conference of the Mid-South Educational Research Association, New Orleans, LA, on November 5, 1998.

EA029735

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Developmental/remedial enrollment is a growing national phenomenon. Many states have instituted written polices and procedures to govern developmental/remedial courses. The policies and procedures instituted assist in assuring the educational outcome of students is successfully designed.

> Four-fifths of the colleges and universities in the Southern Regional Education Board region have written policies to govern the placement of academically underprepared students and 45% or more of all public institutions report that they are guided by state or system level policies. (Abraham, 1991, p. 3)

According to Brier (1985), developmental/remedial education programs are planned so that the necessary skills needed by students can be provided to complete college-level courses. Brier further states that "programs may include some or all of the following components: identification of skill-deficient students, advisement, placement, courses and academic support for the remediation and retention of skill-deficient students" (p. 5).

According to Abraham (1991) the Southern Regional Education Board (SREB) has established as one of its goals for the year 2000 that "four of every five students entering college will be ready to begin college-level work" (p. 12). In 1988, one third of the students enrolled in the 606 institutions under the jurisdiction of the SREB was in at least one developmental/ remedial course. The SREB's survey indicated that Black and Hispanic students were more prone to be enrolled in remedial courses than any other group of students (Abraham, 1991).

Historical Perspective

Colleges and universities have been providing developmental/remedial courses for underprepared students since the early 1800s (Pintozzi, 1987). At Yale University, in 1828, a

developmental study program was in place for students with "defective preparation." Defective preparation was described as subnormally ready for a normal course of study. According to Pintozzi (1987), "colleges should provide whatever elementary instruction the schools fail to give, to assure the success of students" (p. 4).

Weissman, Silk, and Bulakowski (1995) stated that several studies were conducted that justify the existence and effectiveness of developmental/remedial education courses. Kulik, Kulik, and Shwalb, (1983) concluded that students who were high risk and disadvantaged demonstrated ". . .improved persistence and higher grade point average" (p. 398) once they enrolled in developmental/remedial courses.

Seybert and Soltz (1992) conducted a study referencing the effectiveness of community colleges' developmental/remedial courses which were reading, English, and mathematics. Students who completed the developmental/remedial courses experienced a drop in their grade point averages "in the semester after completion" (p. 5) of the developmental/remedial courses; however, their grade point averages begin to increase due to the students' performance. This study also revealed that although students enrolled in developmental/remedial courses received passing grades, their grade point averages and completion rates were lower than the students not needing developmental/remedial courses (Seybert & Soltz, 1992).

Kulik, Kulik, and Schwalb (1983) completed more than 300 studies in a major meta-analysis research which concluded "students enrolled in developmental/remedial programs consistently improved their grade point averages (p. 397-414). Haeuser (1993) compared students enrolled in developmental/remedial courses with the general population. This study revealed over one-half of the students that were enrolled in developmental/remedial courses completed their

courses and "had higher persistence rates than the general population from fall to spring semesters" (1993, p. 10).

The Texas Higher Education Coordinating Board (1995) compared students enrolled in developmental/remedial courses success rates to the success rate of students not enrolled in these courses in 1989-95 and 1990-1996, based on "grade point averages above 2.0 (C average), attempting and passing college level coursework with a D or higher, retention rates, and highest awards earned" (p. 8). In the state of Texas, students who completed required developmental/ remedial courses performed at a comparable rate to students who were not required to take developmental/remedial courses (Texas Higher Education Coordinating Board, 1995).

Profile of Students Enrolled in Developmental Remedial Courses

From the population of the 606 institutions that responded to a SREB survey approximately one-third of the first-time freshman enrolled in their institutions were in at least one remedial class. The public institutions reported the largest percentage (42%) of freshman enrolled in remedial classes attended two-year colleges, while 38% attended four-year liberal arts/comprehensive colleges. In doctoral/research institutions, 20% of students enrolled in at least one remedial course (Abraham, 1991). Private institutions reported 47% enrolled in remedial courses at two-year institutions, while 34% were enrolled in four-year liberal/arts comprehensive institutions, and 19% were enrolled in doctoral/research institutions.

In another study 1,644 students were tracked from Spring 1992 through Fall 1994. Of these students, 1226 were classified as college level and 418 were classified as skill deficient (Weissman, Silk, & Bulakowski, 1995). Two hundred thirty-nine students classified as skill deficient were remediated by the end of the Fall of 1994, while 179 did not remediate. The 179

students who did not remediate earned fewer credits, earned lower than C average in their course work, and their cumulative GPA attained was 1.52, which was much lower than students who remediated (2.17 GPA).

Race.

The SREB survey indicated that Blacks and Hispanics were more likely to be enrolled in remedial courses than any other group of students. From the 606 institutions that responded, 53% of the Black first time freshmen were enrolled in at least one remedial course, and 50% of the Hispanic first time freshmen were enrolled in at least one remedial course (Abraham, 1991).

The survey further indicated that 35% of all race and ethnic groups enrolled in public institutions surveyed were enrolled in at least one remedial course. Also, 34% percent of all race and ethnic groups enrolled in private institutions surveyed were enrolled in at least one remedial course (Abraham, 1991). Enrollment for Black students in public institutions was 31%, Hispanics, 32%, Whites, 27%; and Non Resident Aliens, 10%. Private institutions reported 49% of all Black first time freshmen were enrolled in remedial courses, 28% were Hispanics, 21% were White, and 2% were Non-Resident Aliens (Abraham, 1991).

The Texas Higher Education Coordinating Board (1995) reported 23,654 students needing developmental/remedial courses. The total population of students needing mathematics remediation was 20,051. The students enrolled in mathematics developmental/remedial courses were 8,542 White, 3,553 Afro-American, 6,930 Hispanic, and 1,026 of other origins.

Gender.

Gender was an area that also significantly impacted the survey conducted by SREB. In two-year public institutions 37% of the male population were enrolled in developmental/remedial

courses, and 37% of the female population were enrolled in these courses. In four-year liberal arts/comprehensive institutions, 35% of the male population were enrolled in developmental courses, and 34% of the females were enrolled in these courses. In four-year doctoral/research institutions, 17% of the male population were enrolled in developmental/remedial courses, and 21% of the female population were enrolled in these courses. An average of 29% of the male population enrolled in all public institutions were enrolled in developmental/remedial courses versus 31% of the female population (Abraham, 1991).

The purpose of this study was to describe the educational outcomes of students enrolled in developmental/ remedial courses at one postsecondary institution. More specifically, this study addressed the following questions:

1. What are the demographics of students enrolled in developmental/remedial courses?
2. What percentage of students pass developmental/remedial courses on the first attempt?
3. How do pass/fail elements modify the educational outcome of students who were enrolled in developmental/ remedial education courses?

Method

To investigate the questions posed, a non-experimental descriptive research design was selected. The investigation of what is the educational outcome of students enrolled in developmental/remedial courses at postsecondary institutions was within the guidelines of descriptive research.

Population Studied

This study was composed of students who were enrolled in developmental/remedial courses at an institution located in the northern part of Louisiana. The campus is a multipurpose, state-assisted institution of higher education, offering high quality academic and experiential

opportunities to meet the academic, cultural, vocational, social, and personal needs of undergraduate, graduate and continuing education students (Northeast Louisiana University Bulletin, 1996-97).

The student undergraduate population at the institution during Fall 1996 consisted of 2,183 Black students, (male = 703, female = 1,480). The American Indian student population consisted of 40, (male = 18, female = 22). The Asian student population consisted of 315, (male = 152, female = 163). The Hispanic student population consisted of 67, (male = 25, female = 42). The White student population consisted of 7,274, (male = 3,031, female = 4,243). Each parish in the state of Louisiana was represented at the institution during the Fall of 1996. The total number of students from foreign countries was 223. The campus has housing facilities for approximately 3,685 students on campus. Most of the students were commuters.

Procedure

The data collection method was unobtrusive. Data were obtained from the Institutional Research Department at the institution researched. These data were in roster form and provided the following information: (a) the developmental course(s) in which the student was enrolled, (b) the semester and year of enrollment, (c) the age, sex, and race of the student, (d) the number of times the student attempted the developmental course(s). Data were also gathered to determine whether a student graduated, was currently enrolled or not enrolled.

Presentation of Data

Demographics of students enrolled in developmental remedial courses

During Fall semesters 1990, 1991, and 1992, four developmental courses were offered. The courses were as follows: English 090, Mathematics 090, Mathematics 095, Reading 090, Study Skills 095, and LIEN. The average total enrollment of these four courses was 2299. Of the

total enrollment, 95% were traditional students, while 5% were non-traditional, as indicated in Table 1.

Table 1

Traditional and Non-Traditional Students

Average Profile Fall 1990-1992

	Age	Average Total	Percentage
Traditional	15-24	2176	95%
Non-Traditional	25-52	123	5%
Total		2299	100%

The variable race/ethnicity was divided into the following categories: Indian, Asian, Black, Hispanic, and White. The categories were averaged over a three-year period. The total averages were as follows: Indian-.2% Asian-1.8%, Black-35.4%, Hispanic-.5%, White-62.1%, as indicated in Table 2.

Table 2

Average Profile by Race Ethnicity Fall 1990-1992

Race/Ethnicity	Average Total	Percentage
Indian	4.8	.2
Asian	41.6	1.8
Black	833.8	35.4
Hispanic	10.9	.5
White	1407.9	62.1
Total	2299	100%

The variable sex was divided by categories which included male and female. The female population of students enrolled in developmental/remedial courses were averaged over a three year period. Data revealed that 59% of the students enrolled in the developmental/remedial courses over the three year period were females. The remaining population of 41% represented males, as indicated in Table 3.

Table 3

Gender Average Profile Fall 1990-1992

Sex	Average Total	Percentage
Female	1367	59%
Male	932	41%
Total	2299	100%

Percentage of students completing developmental remedial courses on the first attempt

A sample of students enrolled in the following developmental/remedial courses: Mathematics 091, Mathematics 095, English, and the LIEN, during the Fall of 1990, 1991, and 1992 was selected to determine the number of students completing developmental/remedial courses on the first attempt. One thousand forty-four students (45%) of the total average 2,299 students enrolled during the Fall 1990, 1991, and 1992 in developmental/remedial courses were randomly selected. Data indicated that 800 (77%) of the students selected completed developmental/remedial courses on the first attempt. Although, 77% completed the courses on the first attempt, 244 (23%) did not complete the courses on the first attempt. Data indicate some students repeated developmental/remedial courses an additional five times before completing the courses or not re-enrolling in school. Table 4 indicates the numbers and percentages.

Table 4

Percentage of Students Completing Developmental/ Remedial Courses on the First Attempt

	Number	Attempt
Completers on first attempt	800	77%
Non-completers on first attempt	244	23%
Total	N=1044	

Educational outcomes of students enrolled in developmental remedial courses.

Of the 1044 students in the sample enrolled in developmental/remedial education courses during the aforementioned semesters, 171 (16%) of the students graduated within 5-7 years of first enrolling, while 873 (84%) did not graduate. Data indicate 97 (9%) of the students are still enrolled in school. Seven hundred seventy-six (75%) of the students are currently not enrolled in school and did not graduate as shown in Table 5.

Table 5

Educational Outcomes of Students Enrolled in Developmental/ Remedial Courses within a 7-Year Period

	Number	Percent
Graduated	171	16%
Enrolled	97	9%
Not enrolled	776	75%
Total	1044	100%

Analysis of Data

These data reveal that students enrolled in developmental/remedial courses were traditional (95%) students who completed courses on the first attempt (77%). These data are similar to results of the SREB study as reported in the literature review.

Forty-five percent of the students were enrolled in developmental/remedial courses. This figure is slightly higher than the SREB study, which found 38% of its students in four-year institutions enrolled in developmental/remedial courses.

First-time freshmen enrolled in developmental/remedial courses in the SREB region reported 32% of the students enrolled were Black, 31% Hispanic, 27% White and 10% Non Resident Alien. At the institution researched, 62.1% were White, .5% Hispanic, 35.4% Black, 1.8% Asian and .2% Indian. Data indicate Black enrollment is higher in the SREB region while at this institution White enrollment is higher.

Most of the students enrolled in developmental/remedial courses at this institution were White (62%) and female (59%). Black enrollment in developmental/remedial courses (35.4%) is somewhat higher than Black enrollment in the University (25%).

The percentages of students completing developmental/ remedial courses on the first attempt at the institution researched were 77%. The number of students who passed developmental/remedial courses according to the Texas Higher Education Board were 77%, indicating completion rates are similar.

The educational outcomes of the students enrolled in developmental/remedial courses at the institution researched were as follows: 16% graduated; 9% were still enrolled after 7 years; and 75% were not enrolled after the 7-year period. The Texas Higher Education Board indicated after a 5-year period, 23% graduated, 69% were still enrolled and 8% were not enrolled. The

Conclusions

1. After a seven-year period 16% of the students enrolled in developmental/remedial courses graduated; 9% were still enrolled; and 75% were not enrolled at this institution

2. Seventy-seven percent of the students who were enrolled in developmental/remedial courses completed the courses on the first attempt.

3. More females were enrolled in developmental/remedial courses.

4. More traditional students were enrolled in developmental/remedial courses.

5. Developmental/remedial students were typically White, female, traditional students who completed the courses on the first attempt.

Recommendations

1. A junior division, which would organize, assist in retention, and establish exit criteria, could be created, so that all students who are enrolled in developmental/ remedial courses would be under one department until they complete the exit criteria.

2. A Tracking System could be designed to monitor students who are enrolled in developmental/remedial education courses.

3. Design a Mentoring Program that would act as support designed to assure students that developmental/remedial courses are not created to hinder progress, but to build upon to make them stronger, more successful students.

4. Evaluate developmental courses to make sure the needs of students are being met.

5. Select faculty who want to teach developmental/remedial courses.

6. Write grants and request funding to develop a support system for students in developmental/remedial programs.

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